

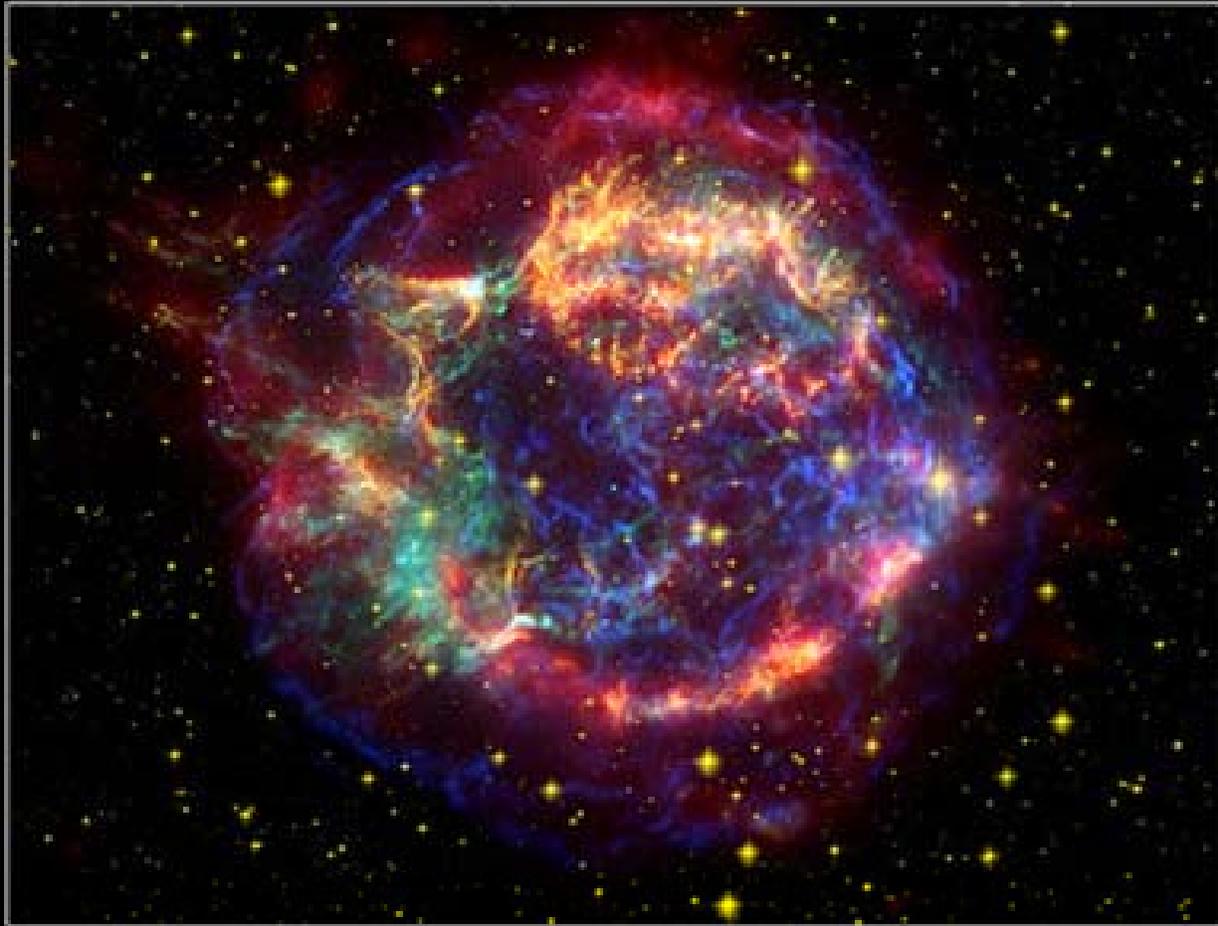


Desert Skies

Tucson Amateur Astronomy Association

Volume LV, Number 1

January, 2009



Cassiopeia A Supernova Remnant
NASA / JPL-Caltech / D. Kreuze [Steward Observatory]
ssc2005-14c

Spitzer Space Telescope • MIPS
Hubble Space Telescope • ACS
Chandra X-Ray Observatory

Cassiopeia A Supernova Remnant

Inside this issue

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- ◆ Constellation of the month
- ◆ TAA Astronomy Complex Updates

Cover Photo: This image is a composite of Chandra (X-ray), Spitzer (IR) and Hubble space telescopes (JPL-CalTech, NASA, Steward Observatory)

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Membership in the TAAA

Annual Fees

Individual membership	\$25.00
Family (includes two adults plus minor children)	\$30.00
Youth under 18 years must join as a family upon parental or guardian acknowledgement of participation in TAAA events. Ask the Treasurer for the required form.	

Discounts (one discount allowed, subtract from above rates)

Seniors (over 60 years)	\$2.00
College Students, Teachers (K - 12)	\$8.00
Youth under 18 yrs (form required, contact the treasurer).....	\$13.00

Options (add to above membership rates)

Tucson society of the Astronomical League (TAL) fees.....	\$ 7.50
Sky & Telescope Magazine 1 year (12 issues)	\$32.95
Astronomy Magazine 1 year (12 issues)	\$34.00
2 years (24 issues)	\$60.00
Postage for New Member Pack	\$ 4.80

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, and General/Undesignated.

Renewal Information

- Your membership expires as indicated on your mailing label.
- TAAA members may join the Tucson society of the Astronomical League (TAL) at the time they join or renew.
- Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Rates are given above. Allow 3 months for processing. Subscriptions must be sent through the TAAA. *Do not send money directly to the*

magazines. To change an individual subscription to the group rate, pay the subscription amount to the TAAA treasurer. Include your magazine renewal notice.

- Please include a note explaining what you are paying for. Credit cards are not accepted. Write one check or money order for fees plus any options or donations. Make it payable to TAAA and send to:

Tucson Amateur Astronomy Association
PO BOX 41254 Tucson, AZ 85717

Mailing Address or Email Changes - Send to address above or email the treasurer.

TAAA Mission Statement - The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

Desert Skies Publishing Guidelines - All articles, announcements, news, etc. must be submitted by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. Submissions should be submitted in Word compatible files via e-mail or on a recordable media.. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

George Barber
TAAA/Desert Skies Editor
15940 W Ridgemoor Ave
Tucson AZ 85736

Join our Email Lists on YahooGroups

Announcements: <http://tinyurl.com/e7o3y> (TAAA news, no posting allowed, 15/month)
TAAA Forum: <http://tinyurl.com/hwoau> (general astronomy discussion, posting allowed, 75/month)
TAAA Dark Site: <http://tinyurl.com/3d8ts9> (discussion of dark site issues, posting allowed)

Desert Skies is published monthly by the
Tucson Amateur Astronomy Association, Post Office Box 41254, Tucson AZ 85717.

President's Message

I hope that everyone had a wonderful and safe Holiday. The holiday party was a great success as usual. I would like to offer a huge thank you to Bill and Mary Lofquist for hosting the party. We all are very grateful for their generosity and hospitality in opening their home to us once again. I would also like to thank everyone who provided the generous gifts we were able to raffle off. Thank you also to everyone who brought the delicious food we all enjoyed.

Well it's a new year, and what a year it stands to be, both within the club and for Astronomy in general. This year has been officially designated "The International Year of Astronomy" by the IAU. It marks the 400th anniversary of when Galileo turned his telescope toward the heavens and forever changed how we look at the stars and planets. What does that mean for us?

Events and activities are planned throughout the year all over the world to bring the night sky to more people than ever around the world. Since this ties in directly with our clubs mission, we will be planning to join in with the IYA2009 activities as often and in as many ways we can.

There are several ideas that have been discussed among the board members. We will share these with you as we develop and finalize them. If you have ideas or hear of something you would like the club to participate in, please bring them to a board member. We would love to hear from you.

This year we will also see a great deal of activity on the dark site development. In the December board meeting, a motion was passed to make the financial commitment of the club to fund Phase 1 development of the dark site. We see this as an important milestone for moving forward with the deeding and permit activity for the site. Please look for articles within this issue for a status of the development of the site and for future fund raising activities. It is very important as we move forward with all of the wonderful plans on this project that we find ways to fund them.

Happy New Year and as always, clear skies,

Ken Shaver
TAAA President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, January 2, at the Steward Observatory Auditorium - Room N210

ASTRONOMY ESSENTIALS: 6:30 pm

Title: Objects of the season

Speaker: Dr. Mary Turner

Dr. Turner will give her quarterly update on the best objects for observing during the winter season.

GENERAL MEETING: 7:30 pm

Title: Observing and Imaging Virtually Unknown Supernova Remnants

Speaker: Bill Gates

This month's lecture is being presented by TAAA member Bill Gates who recently joined the TAAA. He provided this description of his lecture.

Supernova remnants such as the Veil nebula are among the sky's most beautiful objects. Often attaining speeds approaching 3,000km per second, these interstellar shock fronts are exciting targets for amateur imagers and visual observers. While more than 250 supernova remnants are now recognized, most observers assume that only a handful, such as the Crab, Veil and Vela SNRs are visible to amateurs.

I was excited to find that dozens of fascinating supernova remnants are within the reach of today's amateur astronomers. Observing with modest telescopes, I have seen segments of 14 SNRs that are not even plotted on Millennium Star Atlas! Few of these have ever been reported visually,

or imaged with today's sensitive CCDs. Existing professional pictures of these objects are often pre-CCD and not state of the art. I'm confident that today's amateur observers and imagers can detect many of these objects, and improve on existing image detail.

BOARD OF DIRECTORS MEETING: Wednesday, Jan. 14, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:

05 Jan - Astro-Imaging SIG at China Rose

08 Jan - Astronomy Fundamentals SIG

09 Jan - Blenman ES Solar Observing Party

16 Jan - Anza Trail School Star Party

17 Jan - Sunsites Community Star Party

23 Jan - Blenman Elementary Star Party

24 Jan - TAAA Star Party at Las Cienegas

29 Jan - Picture Rocks Intermediate School Star Party

31 Jan - TAAA and AF-SIG Star Party at TIMPA

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Jan. 17. Printing: Mon, Jan. 19. Folding Party: Wed, TBA. Mailing: Thu, Jan. 22. The newsletter will be published on the TAAA website at least one week prior to the following month's General Meeting. Paper copies, when requested, will be mailed at least one week prior to the General Meeting.

Club News

Member News

We welcome these members who have recently joined the TAAA: Jim & Gail Emery, Alan Rose, and Hiram Snowden. Glad to have all of you join! New members can pick up a members pack at a meeting if they didn't request it by mail. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available online at either Yahoo Groups email list website under Files, or at most meetings.)

Astro-Imaging SIG Meeting

Monday, Jan 5, 7pm

China Rose, NE corner Speedway/Rosemont

Our presentations feature CCD images, planetary webcams, and film. Come see some of the state of the imaging art over some Chinese food. Just show up and enjoy the show! For more information, contact Steve Peterson.

Astronomy Fundamentals Special Interest Group

Thursday, Jan 8, 6:30pm

USGS/NWS Bldg, Park & 6th St

The Astronomy Fundamentals Special Interest Group (AFSIG) will meet on Thursday, January 8, at 6:30 pm in room 253 of the Environmental and Natural Resources Building (USGS and Weather Service) on the northeast corner of Sixth Street and Park Avenue on the campus of the University of Arizona.

Lou Faix will present Part Two of a talk entitled "But Where Is It?" which is intended to help beginners find their way around the night sky and locate objects of interest. This month we'll demystify the sky coordinate system and explain the meanings of Right Ascension and Declination. Essential to using that locating process is the procedure for aligning your telescope with the sky. The attributes and uses of Sky Atlases will be explained and a popular Messier object index for sky wonders will be shown. For those with basic telescopes, locating objects using the "star hopping" method will also be explained. That technique is a great way to begin to learn the sky.

TAAA Apparel

Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have got hats, T-shirts, denim shirts, and patches. We take cash and checks.

2009 Calendars

Calendars for 2009 are still available but they are going fast. Be sure to pick one up at the January meeting. You'll find them at the same table where you purchase TAAA apparel. This year we have chosen the Astronomy Magazine "Deep Space Mysteries" calendars. The cost for a calendar is \$10 each (nearly \$3 off the regular selling price), or \$9 each for more than one. Proceeds from the sale of these calendars will be used appropriately as decided by the board. Thank you to all who support the TAAA through the purchase of the yearly calendars.

TAAA KICKS OFF FUNDRAISING CAMPAIGN FOR THE ASTRONOMY COMPLEX

At the December, 2008 general meeting of TAAA we kicked off a fundraising campaign to raise additional support for the building of our new Astronomy Complex. The initial response so far has been \$7,200 in contributions.

We are establishing a Fundraising Working Group to help with the campaign. We hope to apply for our first building permit in early January. As things now stand we have approximately \$95,000 to \$100,000 from past contributions to use for this project. Our estimates are that the first phase of building will cost somewhere from \$112,000 to \$130,000. We will have a precise budget for this phase after we get the final plans for the restrooms and bids from the candidates for contractor. As you probably know, the land for the Astronomy Complex is being contributed through the generosity of four TAAA members who purchased the land. TAAA is developing 16 acres for the Complex.

The first phase of building includes the well and water system, the roads (external and internal), the septic system, the electric system and the restrooms. These parts of the infrastructure will enable us to begin using the facility as we continue to add the other parts in later building phases.

Later phases in our master plan, based on ideas from members, include member observing pads and observatories, the 16' dome, a large roll-off roof observatory, a clubhouse, a ramada, sleeping rooms, an amphitheater, tent and camper sites and storage units. If needed, we may add a caretaker residence at some point in the future. These phases will take several years to develop.

Members can contribute before the end of the year to obtain tax deductions on 2008 tax returns.

In order to participate in the campaign, please send your contributions or pledges to Terri Lappin, Treasurer, Tucson Amateur Astronomy Association, P. O. Box 41254, Tucson, AZ 85717. Also, please indicate on the check that you are making a contribution to the TAAA Astronomy Complex.

We will be providing regular updates on progress in the

Club News (cont.)

newsletter and at our general meetings. After we begin the first phase of building we will be inviting TAAA members to help with future planning. We will need to design the clubhouse, the 16' dome observatory and the roll-off roof observatory. We will also need to plan the landscaping and the remote control technology. So there will be many opportunities for member involvement.

Thank you for your interest in this important project of TAAA. If you have any questions, please contact me.

Bill Lofquist
520-297-6653
wlofquist@comcast.net

Upcoming Lectures

Terri Lappin is in the process of filling our lecture schedule. If you have a suggestion for either an Astronomy Essentials or Invited Lecture, or if you want to give one yourself, let Terri Lappin know.

Feb 6	<i>Astronomy Essentials</i>	OPEN
	<i>Invited Lecture</i>	Richard Greenberg Europa
Mar 6	<i>Astronomy Essentials</i>	Ken Shaver IYA 2009 Activities
	<i>Invited Lecture</i>	Astrophoto SIG Presentations
Apr 3	<i>Astronomy Essentials</i>	Mary Turner Seasonal Objects
	<i>Invited Lecture</i>	OPEN
May 1	<i>Astronomy Essentials</i>	OPEN
	Members Night Presentations by TAAA Members	



Night Sky Network Toolkits

The TAAA has a wonderful resource available for outreach events. Below is a list of the Night Sky Network Outreach Toolkits developed by the Astronomical Society of the Pacific under contract with NASA. These toolkits are specifically developed for amateur astronomers and are perfect for those early hours at a star party before its dark enough to observe. Some projects are well suited for use when it's dark. They are best when used in a small group as you might have around your telescope at a school star party.

Here's a complete list of the NSN Outreach Toolkits we have:

- PlanetQuest:** explains planet detection techniques
- Our Galaxy, Our Universe:** scale model of the Milky Way galaxy and the Universe
- Black Hole Survival Kit:** what is a black hole and how does it affect objects nearby
- Telescopes - Eyes on the Universe:** explains basic principles of optics, the human eye, and observing
- Shadows and Silhouettes:** covers lunar phases, eclipses, and transits
- Exploring the Solar System:** scale model of solar system and NASA exploration of planets
- GLOBE at Night:** light pollution principles
- Supernova!** life cycle of massive stars, touches on life cycle of sun-like stars
- SolarScope:** provides a white light image of the sun suitable for small group viewing.

These toolkits come to us free of charge. Using them as part of our outreach activities qualifies us to receive future toolkits. We appreciate those who have put the toolkits to use this year. Six activities have been logged so far - and we still have the fall months to go. This is better than we've done in the last couple of years.

Each toolkit contains several projects. You pick and choose which part you want to demonstrate. They contain essentially all the materials needed. All NSN toolkits



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Club News (cont.)

include a Resources CD and a training DVD. You can request a copy of the CD and DVD set from Terri Lappin (give her a week or so to make them up). The CDs contain PowerPoint presentations, along with scripts and background information should you be presenting to a larger audience.

Anyone can borrow the toolkits, TAAA membership is not required. Contact Terri Lappin (see page 2) to make arrangements. Terri can also provide one-on-one training for all toolkits.

TAAA Website – Login/Password Required

The TAAA website now has more resources for members viewing. Members must login using the user name and password that has been distributed by email. If you haven't received the email message, it may mean we do not have your latest email address in our records. Please contact Terri Lappin who will update your information in our records. This is also how to ensure that you receive the newsletter. We currently have a common user and single password that everyone uses. You do not enter your email address or any other personal information to gain access to the member's pages. Should you not have email and want the user name\password, contact any board member.

Basha's Shop & Give

Basha's has an excellent program to support local non-profit groups like the TAAA. It's called Shop & Give. This is a no-brainer fundraiser for the TAAA. If you shop at Basha's and have a "Thank you" card, the next time you go through the checkout, give the cashier our ID number: #23178 for the Shop & Give program. They can look up the number using our name, too. It's that easy! Just do it once. At the end of the program next spring, Basha's will make a donation to the TAAA based on the total sales of every Thank You card linked to our number. We can receive up to \$5000, but that will require lots of people to sign up. Anyone can participate, so give our number to family and friends. We could use a few more participants to assure that we receive a donation from Basha's. If you participated last year, you need to give our ID number again, or your sales won't count. Thanks to everyone who participates.



Member's Events

TAAA Star Party at Las Cienegas (Empire Ranch) Saturday, Jan. 24

Las Cienegas (formerly Empire Ranch) has been our normal dark-sky observing site for quite a number of years. Please try to arrive before sunset. Stay as long as you like, but let everyone know when you are ready to leave; someone may be taking astro-images. Bring a telescope if you have one, but you don't need one to attend. Any member would be glad to let you look through their telescope. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cold temperatures. Attendees should park their vehicles either perpendicular to the airstrip facing toward the center of the strip, or parallel to the airstrip along either side facing west. That way, when you are ready to leave, you will not have to back up and turn on your bright white backup lights. See the directions to Las Cienegas on the outside flap of this newsletter.

TAAA and AFSIG Star Party at TIMPA Saturday, January 31

Come on out and enjoy the winter skies! TIMPA star parties are great for both beginners and experienced observers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don't own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them. This is a great way to check out different telescope designs before you make that all important decision to buy. We'll do our best to get you the answers you need. If you have friends or relatives who are curious about amateur astronomy, feel free to bring them along. The TIMPA site features a large parking area, and full restroom facilities. Directions to the TIMPA site are located on the outside flap of this newsletter. Don't forget to dress warmly!

The new observatory at TIMPA, featuring a 14-inch telescope, should also be open for use.

Public Star Parties and Community Events

All members are asked to support the TAAA School Star Party program and other community events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners as you may only need to know a few objects in the sky. Even without a telescope, you can be valuable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

Blenman ES Solar Observing Party **Central** Friday, 1/9/2009 No. of Scopes: 4

Blenman Elementary will be planning Solar Observation for an estimated attendance of 600 students at 1695 N Country Club. From Country Club and Pima, go one block west to Bentley Ave. Park in the parking area off Bentley Ave. Use the Bentley Ave entrance. Proceed to the cafeteria and exit into the courtyard. Viewing will be on the basketball court. Contact person Carrie Vonier can be reached at 232.6500 or email Carrie.Vonier@tusd1.org. Set-Up Time: 10:00am. Observing will be from 10:45 am to 2:00 pm.

Anza Trail School Star Party **South** Friday, 1/16/2009 No. of Scopes: 4

Anza Trail School will be hosting Astro Science Night for an estimated attendance of 125 students and parents at 15490 S. Rancho Sahuarita Blvd. 1-19 to Sahuarita rd exit left/east to Rancho Sahuarita blvd (1st light) left to school down a mile or so on the left (1st entrance). Contact person Mary Lamoreaux can be reached at 520-625-3502 or email MLAMOREAUX@SAHUARITA.K12.AZ.US. Set-Up Time: 6:15pm. Observing will be from 6:45pm to 8:45 pm. Sunset: 5:47pm Dark Sky: 6:43pm Moon Phase: (no moon during viewing).

SPECIAL STAR PARTY IN SUNSITES

Friday, JANUARY 17
Bill Lofquist

TAAA has been invited by the Library in Sunsites to provide another star party fundraiser for the library. It will be held at the Sunsites Community Center on January 17 beginning at 6:30 PM. We will plan to set up at 5:30.

Mary Turner has agreed to present a program for those who attend. Last year about 100 people came to the event.

This is an important opportunity for us to get to know the people of the Sulphur Springs Valley communities better. Interest has been expressed in making it an annual event. A number of residents of the community supported our request for a Special Use Permit last February by talking before the Planning and Zoning Commission in our behalf or writing letters of support to the Commission. We have also made contact with all of the schools in the immediate area of our Astronomy Complex and have had one star party with a nearby school.

We hope to have eight or ten scopes there, and there will be an opportunity to sign up for it at the January General

Meeting of TAAA.

East on I-10 to the Dragoon turn off. Follow Dragoon Rd. south to Hwy 191. Go right on Hwy 191 to Sunsites. Viewing will be at the Community Center. Contact person Bill Lofquist can be reached at 297-6653 or email wlofquist@comcast.net. Set-Up Time: 5:30pm. Observing will be from 6:45pm to 8:45 pm. Sunset: 5:48pm Dark Sky: 6:44pm Moon Phase: Last Quarter. The Sunsites Community Center is located on the last street at the south end of the main Frontage Road in the village. Turn to the west, and it will be about one block on the left side of the road.

Call me if you have questions at 520-297-6653, or by email at wlofquist@comcast.net.

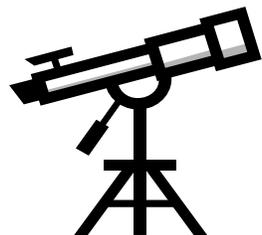
Blenman Elementary Star Party **Central** Friday, 1/23/2009 No. of Scopes: 5

Blenman Elementary will be hosting a Star Party for an estimated attendance of 150 students and parents at 1695 N Country Club. From Country Club and Pima, go one block south to Lee St. Park on the street. Use the back entrance. Viewing will be on the basketball court. Contact person Carrie Vonier can be reached at 232.6500 or email Carrie.Vonier@tusd1.org. Set-Up Time: 6:15pm. Observing will be from 6:45pm to 8:45 pm. Sunset: 5:53pm Dark Sky: 6:49pm Moon Phase: (no moon during viewing).

Picture Rocks Intermediate School **West** Thursday, 1/29/2009 No. of Scopes: 5

Picture Rocks Intermediate School will be hosting Star's Night for an estimated attendance of 150 students and parents at 5875 N Sanders Rd. Take i-19 south, exit Ajo. Go west to Kinney. Take Kinney north past Desert Museum, through Saguaro West National Park to Sandario. Turn right on Sandario and go north. Take a left onto Rudasill, and then another left onto Sanders. Viewing location will be the bus loop turnaround. Contact person J.C.Schembri can be reached at 616-3700 or email J.C.Schembri@maranausd.org. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:00pm. Sunset: 5:59pm Dark Sky: 6:54pm Moon Phase: 3-day old crescent.

Telescopes for Borrowing



Free service



Only for Members

Don't own a telescope?
Our Loaner Program is your answer!

These telescopes are in the program

- Sears 60mmf/15 on equatorial mount
- Unitron 62mmf/14.5 on equatorial mount
- Meade 90mm ETX
- Coulter Odyssey8 8-inch f/4.5 Dobson
- Meade 8-inch f/4 Schmidt-Newtonian LX200
- Meade 10-inch f/4.5 on equatorial mount
- Meade 10" LX200 GPS (requires training session)

Beginners, here's your chance to learn and observe the sky before buying any equipment. The Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy. Contact the Equipment Loan Coordinator (see page 2) or any club officer for details about these telescopes.

SAIDA NEEDS MORE HELP FROM MORE TAAA MEMBERS. AFTER ALL, WE WILL ALL BENEFIT FROM DARK SKIES IN OUR AREA !!!

For more information, go to: www.sa-ida.org
Or feel free to contact:

John Polacheck
E-mail: jpolach@dakotacom.net
Telephone: 743-1362

SAIDA meets on the second Wednesday of each month from 5:30 to 7:30 PM in the IDA office located at 3225 N. First Ave, just North of Ft. Lowell. And.....WE USUALLY HAVE PIZZA !!!

Dark Skies for January 2009

DARK SKIES (no twilight, no moonlight) for Tucson in 24-hour MST: 18=6pm, 20=8pm, 22=10pm, 0=12am
RISE, SET, VISIBILITY for sun and bright planets: rise for morning object, set for evening object

We/Th 31/01 21:30 - 5:58	Su/Mo 11/12 - - -	Th/Fr 22/23 19:14 - 5:40
Th/Fr 01/02 22:28 - 5:58	Mo/Tu 12/13 19:06 - 19:49	Fr/Sa 23/24 19:15 - 5:57
Fr/Sa 02/03 23:26 - 5:58	Tu/We 13/14 19:07 - 20:57	Sa/Su 24/25 19:16 - 5:57
Sa/Su 03/04 00:26 - 5:59	We/Th 14/15 19:08 - 22:02	
	Th/Fr 15/16 19:08 - 23:04	Su/Mo 25/26 19:16 - 5:57
Su/Mo 04/05 01:29 - 5:59	Fr/Sa 16/17 19:09 - 0:04	Mo/Tu 26/27 19:17 - 5:56
Mo/Tu 05/06 02:37 - 5:59	Sa/Su 17/18 19:10 - 1:04	Tu/We 27/28 19:25 - 5:56
Tu/We 06/07 03:47 - 5:59		We/Th 28/29 20:23 - 5:56
We/Th 07/08 04:58 - 5:59	Su/Mo 18/19 19:11 - 2:03	Th/Fr 29/30 21:20 - 5:55
Th/Fr 08/09 - - -	Mo/Tu 19/20 19:12 - 3:01	Fr/Sa 30/31 22:19 - 5:55
Fr/Sa 09/10 - - -	Tu/We 20/21 19:12 - 3:58	Sa/Su 31/ 1 23:21 - 5:54
Sa/Su 10/11 Full Moon	We/Th 21/22 19:13 - 4:51	

Weekend	Sun	Sun	Mercury		Venus		Mars		Jupiter		Saturn		
Sa/Su	Set	Rise	Set	Vi	Set	Vi	Rise	Vi	Set	Vi	Rise	Vi	Vi=Visibility
03/04	17:30	7:24	18:58	3	21:10	-4	6:54	-	18:42	3	22:43	1	-3 brilliant
10/11	17:36	7:24	18:55	5	21:18	-4	6:49	-	18:23	6	22:15	1	0 conspicuous
17/18	17:42	7:22	18:13	-	21:25	-4	6:43	-	18:03	-	21:47	1	3 moderate
24/25	17:48	7:20	Rise:	-	21:29	-4	6:36	9	Rise	-	21:18	1	6 naked eye limit
31/01	17:55	7:16	5:54	5	21:32	-4	6:29	9	6:57	-	20:49	1	9 binoculars limit

By Erich Karkoschka

TAAA Board of Directors Meeting - 10 December 2008

Attending: Board members present (8): Ken Shaver (presiding), Keith Schlottman, Terri Lappin, Luke Scott, George Barber, Bill Lofquist, John Kalas, Teresa Plymate. Members Present (3): Robert Crawford, Liz Kalas, Claude Plymate.

The president called the meeting to order at 6:30 pm.

Minutes from the November board meeting were approved unanimously.

Announcements

The club will proceed with an order for an equatorial wedge for the 14" Meade telescope at the TIMPA observatory.

Keith Schlottman will prepare and submit an application for directors and officers insurance.

There is a new caretaker at the TIMPA site.

TIMPA may add night flying dates in 2009.

Treasurer's Report - Terri Lappin

The club had no non-routine expenditures during the month.

A draft 2009 budget plan will be circulated to board members in December for discussion at the January board meeting.

2010 Astronomical League Conference

Kim Patton of IDA National Headquarters has approached the club about hosting the League's annual conference in Tucson in 2010. IDA and likely the Huachuca club would offer additional assistance.

While recognizing the great amount of work and planning required to host the event, the board views this as a significant opportunity to garner interest and exposure for the club. Bill Lofquist volunteered to contact the Astronomical League for more information and report to the board in January.

Dark Site Land Development - Robert Crawford, Bill Lofquist

The club will hold a public star party at Sunsites Community Library on January 17. 8 to 10 telescopes are needed.

The Strategic Planning Group (SPG) presented for discussion a document containing budget estimates for Phase I construction. Estimated costs for Phase 1 range, approximately, from \$113,000 to \$130,000.

A motion was made by Keith Schlottman wherein the TAAA Board of Directors authorizes expenditure of up to \$130,000 towards Phase 1 construction on the Dark Site as estimated in the document titled "Budget Phase1(a) 2008 12 05.xls." The motion was approved by a unanimous vote.

A Fund Raising Strategy Committee will be organized to develop ideas and proposals.

Newsletter

Members with Comcast e-mail accounts are not receiving the monthly newsletter announcement due to the message being blocked by Comcast mail servers. Deborah Malmos is investigating whether G-mail can be utilized as an alternative. If necessary, members with Comcast e-mail accounts will receive a paper newsletter until the issue is resolved.

Meeting adjourned at 9:20 pm.

Respectfully submitted,
Luke Scott
Secretary

Desert Skies Classified

FOR SALE	Almost new 8"XLT SCT ASGT with "Flash" upgradeable. Excellent condition. Works "dead on". Used about 4 times as "get and go" scope for public events, etc. Purchased this year (2008). Still under warranty. Includes a 2" back and 2" Williams Optics Diagonal. \$1200. List price \$1615. Contact Jerry Farrar 520-731-1104 (C# 520-403-2404).e-mail.jandkfarrar@msn.com [04/09]
FOR SALE	Meade LX 200 12" go to telescope Multi coated, ultra high, Schmidt-Cassegrain catadioptric, D=304.8mm F=3048mm F/10 with a solar filter, Orion superwide 22mm, Meade super Plossi 26 mm, Meade Barlow 2x teleneegative amplifier, planet filters, and of course everything that the scope came with. Works great in excellent condition optics are perfect. Only used scope about 10 to 15 times. Works perfectly. Selling for \$2,500.00 paid \$6,000 including accessories. Moving to china on Jan 20th so please call before the 20 th of Jan. Ask for James. 480-797-3061, jedwards@libertyone.com [04/09]
FOR SALE	12" LX-200GPS. Comes with field tripod, Meade super wedge, 3D counterweight system, Losmondy mounting plate system. Needs focuser if used for imaging. \$3,000.00. Contact Jim Charboneau StellarObservatory@starband.net . [04/09]
FOR SALE	Vixen GP-D2 German Equatorial Mount with tripod. Made in Japan, this is Vixen's latest version of their famous GP line. White, excellent condition must see. List price \$1,169, asking \$799, neg. Call J.D. At 760-8248. [02/09]
FOR SALE	Meade 8 inch LX90 (in original box) including heavy duty tripod, 3 eyepieces, 2 diagonals, optical and Telrad finder scopes, Barlow lens, filter. Purchased from Sky works in 2002 for \$2,335. Sale price of \$1,300 includes your choice of several astronomy or viewing books. Jim Smith at sawtell1190@q.com or 572-1221 [02/09]
SERVICE	Green laser pointer need repair or tune up? Contact Donald Arndt at (415) 215-2409 or donaldja@pacbell.net. Typical repairs cost \$25-50, including return shipping.

Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this list, call or e-mail the newsletter editor.

Constellation Report by Chris Lancaster
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Monoceros

The Unicorn

If you browse through the winter skies with the naked eye you will enjoy some of the best sights available of the heaven's brightest stars and most recognizable constellations. But then you will come to a rather lackluster region alongside Orion. At first glance this area may look uninteresting, but it compensates for its lack of bright stars with some excellent deep sky objects. The winter Milky Way cuts right through this area occupied by the constellation of Monoceros, so it is rich in nebulae and star clusters.

It was in the early 1600's that the German astronomer Jakob Bartsch established the constellation of Monoceros out of some dim stars stretching between Orion and his two hunting dogs, Canis Major and Canis Minor. The Latin name Monoceros is derived from the Greek word "monokeras," or "one horned," so this constellation represents the mythical creature called a unicorn, although it might require a fantastic imagination to see a unicorn in this pattern of stars.

One of the brightest stars of this constellation is Beta Monocerotis, among the finest multiple stars visible through small telescopes. When Sir William Herschel discovered this system in 1781, he described it as a "beautiful sight." Having a combined magnitude of 3.8, it is a triple system of stars which are uniquely very similar in both brightness and spectral type. Beta Mon A, magnitude 4.7, and Beta Mon B, magnitude 5.2, are separated by 7.4", while Beta Mon C is of magnitude 5.6 and between the two about 2.8" from the B component. All three are of spectral type B2 to B3 and appear as a trio of pure white stars forming a very flat triangle. Another notable binary star is Epsilon Monoceros. Its components are of magnitudes 4.3 (spectral type A5) and 6.7 (spectral type F4) and are separated by 13".

Another binary star worth mentioning is Plaskett's star. It is noteworthy because it is one of the most massive pairs known. Located at RA 06h 37.6' Dec +06d 11', or about 1.5 degrees to the southeast of 13 Monocerotis, this binary, which was first studied by J. S. Plaskett in 1922, is made up of two stars of spectral type O separated by only about 50 million miles. It is estimated that the two stars have masses of 40 and 60 suns and shine with an apparent magnitude of 6.06.

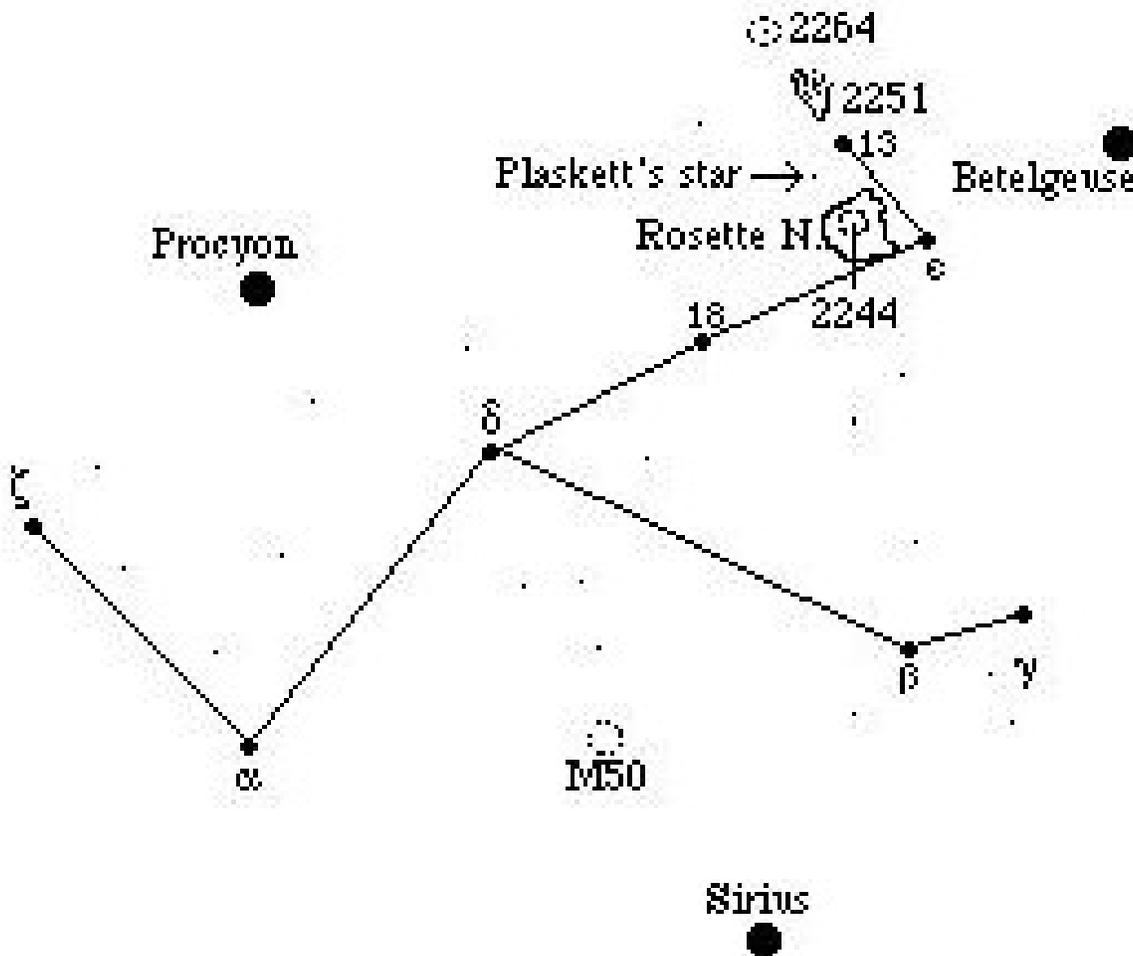
Among the deep sky objects that Monoceros presents to us is M50, a medium sized open cluster that is easily within the grasp of binoculars. Located approximately a third of the distance along a line connecting Sirius and Procyon and shining

Constellation Report by Chris Lancaster (cont.)

at magnitude 7.2, its coordinates are RA 7h 03' Dec -8d 21'. The main group in this cluster is roughly 10' in size. Long exposure photographs bring out about 200 stars within this cluster.

In the northern regions of the constellation are two more splendid star clusters and associated nebulosity.

Starting with NGC2244, this is a bright cluster in the shape of a bent rectangle which lies in the center of a vast, doughnut shaped nebulosity known as the Rosette Nebula. The brightest sections of the nebula, which as a whole occupy an incredible 80' of the sky, actually are given separate NGC designations of 2237, 2238, 2239, and 2246. With dark skies, a 6" telescope will begin to show the soft glow of this dim



nebula, and you may not be able to view the entire structure at once depending on your magnification. This complex of stars and nebulosity is centered at RA 6h 30.3' Dec +5d 03'.

Farther north is NGC2264. The nickname of this cluster is the "Christmas Tree" cluster because of the way it resembles the outline of Christmas tree. It is a large cluster of very young stars about the same size as the lunar diameter, so low power is required to fully see it. Studies suggest that some of the members of the cluster are still undergoing gravitational collapse on their way to main sequence status. The brightest star of the cluster, 4.6 magnitude S Monocerotis, forms the trunk of the tree and shines with the light of 8500 suns. Long exposure images show strong nebulosity near S Monocerotis, but the most recognizable feature is found just off the point of the tree, which points south, and is known as the Cone (or Conus) Nebula. This is a dark nebula about six light years in length, or spanning about 10 arc minutes in the sky, contrasted by brighter clouds surrounding it. You can find NGC2264 at RA 6h 41' Dec +9d 48'.

A much easier nebula to spot is Hubble's variable nebula, or NGC2261. This is located to the southwest of NGC2264 at RA 6h 39.2' Dec 8d 44'. It appears as a fan shaped nebula about 2 to 3 arc minutes in size and of fairly high surface brightness which Edwin Hubble found to vary in overall magnitude, size, and structure, sometimes over the short span of a few months. The nebula shrouds the variable star R Monocerotis, but the variability of this star does not seem to coincide with the behavior of the nebula.

Tucson Amateur Astronomy Association
P.O. Box 41254
Tucson, AZ 85717

Address Service Requested

Please consider renewing your membership on time. Renewal month and dollar amount appears on your address label. Magazine subscriptions are not included. TAL fee is included if participating in TAL. See details on page 2.

Directions to TIMPA and Las Cienegas

Directions to TIMPA Site

GPS coordinates: 32 deg 15.868' N, 111 deg 16.390' W

From the North:

1. Take Ina Rd. west about three miles past I-10.
2. Turn left (south) on Wade Rd.. Wade Rd. becomes Picture Rocks Rd. when the Rd. bends to the right (west).
3. Take Picture Rocks Rd. west to Sandario Rd..
4. Turn left (south) on Sandario Rd. to Manville Rd..
5. Turn right (west) on Manville Rd. to Reservation Rd..
6. Turn left (south) on Reservation Rd. (dirt Rd.) and go about two miles. The TIMPA entrance is on the left.

From the East:

1. Take Speedway Blvd. west and it turns into Gates Pass Rd..
2. Go over Gates Pass and continue west to Kinney Rd..
3. Turn right (north) on Kinney Rd. and continue past the Desert Museum.
4. Kinney Rd. bends left at the entrance to Saguaro National Park West and becomes Mile Wide Rd..
5. Take Mile Wide Rd. west about five miles to Reservation Rd.. Mile Wide Rd. ends at Reservation Rd. and you must turn right (north) onto Reservation Rd..
6. Take Reservation Rd. north about one mile. The entrance to TIMPA will be on the right.

NOTE

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. A list of TIMPA key keepers is available on the TAAA website, or by contacting a board member. For scheduled TIMPA star parties, a designated TAAA representative will provide access to the site.

Directions to Las Cienegas (Empire Ranch)

GPS coordinates: 31 deg 47.356' N, 110 deg 37.913' W

Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is "washboarded" so go carefully. At about 2.9 miles, there is a fork in the road. Stay to the right. When the road ends in a "T", take a left. Cross over a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. 0.1 mile ahead will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.